

WE CLAIM:

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1. A method of tucking a pair of opposing, refastenable side seams into a body portion of a pant-like garment, each refastenable side seam including at least one resilient component, the method comprising the steps of:

positioning the body portion of the pant-like garment between an upper conveyor having an upper vacuum zone and a lower conveyor having a lower vacuum zone, with the refastenable side seams in a fastened position;

holding apart a front region of the body portion from a back region of the body portion using opposing vacuum forces from the upper and lower vacuum zones;

pushing the refastenable side seams into the body portion a distance toward one another, creating longitudinal folds in the garment along outer longitudinal edges of the upper and lower vacuum zones; and

compressing the garment with each of the at least one resilient components pushed into the body portion and in a flat conformation.

2. The method of Claim 1, wherein the upper vacuum zone and the lower vacuum zone each have a transverse width about equal to a desired folded transverse width of the body portion of the garment.

3. The method of Claim 1, further comprising the step of using a plurality of mechanical tucking blades to push the opposing side seams into the body portion toward one another.

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4. The method of Claim 1, further comprising the step of using a pair of opposing mechanical tucking blades, each mechanical tucking blade positioned between the upper conveyor and one of the side seams, to push the opposing side seams into the body portion toward one another.

5. The method of Claim 1, further comprising the step of using a pair of opposing mechanical tucking blades, each mechanical tucking blade positioned between the lower conveyor and one of the side seams, to push the opposing side seams into the body portion toward one another.

6. The method of Claim 1, further comprising the step of using a pair of opposing mechanical tucking blades to push the opposing side seams into the body portion toward one another, with one of the mechanical tucking blades positioned between the upper conveyor and one of the side seams, and one of the mechanical tucking blades positioned between the lower conveyor and one of the side seams.

7. The method of Claim 1, further comprising the step of directing a pair of opposing air bars toward the opposing side seams prior to pushing the opposing side seams into the body portion toward one another.

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8. The method of Claim 1, further comprising the step of reducing a distance between the upper conveyor and the lower conveyor subsequent to pushing the opposing side seams into the body portion toward one another.

9. The method of Claim 1, further comprising the step of reducing a distance between the upper conveyor and the lower conveyor while pushing the opposing side seams into the body portion toward one another.

10. The method of Claim 1, further comprising the step of inserting the garment between two consecutive stacker finger units subsequent to pushing the opposing side seams into the body portion toward one another.

11. The method of Claim 1, wherein the pant-like garment comprises a training pant.

12. The method of Claim 1, wherein the pant-like garment comprises a swim pant.

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Summary

13. A method of tucking a pair of opposing, refastenable side seams into a body portion of a pant-like garment, each refastenable side seam including at least one resilient component, the method comprising the steps of:

positioning the body portion of the pant-like garment on a conveyor having a vacuum zone, with the refastenable side seams in a fastened position;

holding the body portion on the conveyor using vacuum force from the vacuum zone;

pushing the refastenable side seams into the body portion a distance toward one another, creating longitudinal folds in the garment along outer longitudinal edges of the vacuum zone; and

compressing the garment with each of the at least one resilient components pushed into the body portion and in a flat conformation.

14. The method of Claim 13, wherein the vacuum zone has a vacuum in a range of between about 1 inch of water and about 100 inches of water.

15. The method of Claim 13, wherein the vacuum zone has a vacuum in a range of between about 2 inches of water and about 50 inches of water.

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16. The method of Claim 13, wherein the vacuum zone has a vacuum in a range of between about 3 inches of water and about 35 inches of water.

17. The method of Claim 13, wherein the vacuum zone has a transverse width about equal to a desired folded transverse width of the body portion of the garment.

18. The method of Claim 13, further comprising the step of using a plurality of mechanical tucking blades to push the opposing side seams into the body portion toward one another.

19. The method of Claim 18, further comprising the step of using the mechanical tucking blades to control the distance the refastenable side seams are pushed into the body portion toward one another.

20. The method of Claim 13, further comprising the step of using vacuum dead plates to control the distance the refastenable side seams are pushed into the body portion toward one another.

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21. The method of Claim 13, further comprising the step of using a pair of opposing mechanical tucking blades, each mechanical tucking blade positioned between the conveyor and one of the side seams, to push the opposing side seams into the body portion toward one another.

22. The method of Claim 13, further comprising the step of using a pair of opposing mechanical tucking blades to push the opposing side seams into the body portion toward one another, with each of the side seams positioned between one of the mechanical tucking blades and the conveyor.

23. The method of Claim 13, further comprising the step of using a pair of opposing mechanical tucking blades to push the opposing side seams into the body portion toward one another, with one of the mechanical tucking blades positioned between the conveyor and one of the side seams, and one of the side seams positioned between one of the mechanical tucking blades and the conveyor.

24. The method of Claim 13, further comprising the step of inserting the garment between two consecutive stacker finger units subsequent to pushing the opposing side seams into the body portion toward one another.

25. Apparatus for tucking a pair of opposing, refastenable side seams into a body portion of a pant-like garment, each refastenable side seam including at least one resilient component, the apparatus comprising:

at least one conveyor having at least one vacuum zone, the at least one vacuum zone providing sufficient vacuum to hold the body portion in place along outer longitudinal edges of the at least one vacuum zone; and

a device for pushing the side seams into the body portion.

26. The apparatus of Claim 25, wherein the at least one vacuum zone has a transverse width equal to a desired folded transverse width of the garment.

27. The apparatus of Claim 25, comprising an upper conveyor having an upper vacuum zone and a lower conveyor having a lower vacuum zone.

28. The apparatus of Claim 27, wherein the upper conveyor and the lower conveyor converge toward one another along a machine direction path of the conveyors.

29. The apparatus of Claim 27, wherein the upper conveyor and the lower conveyor diverge from one another and then converge toward one another along a machine direction path of the conveyors.

30. The apparatus of Claim 25, wherein the device for pushing the side seams into the body portion comprises a pair of opposing air bars.

31. The apparatus of Claim 25, wherein the device for pushing the side seams onto the body portion comprises two opposing assemblies, each assembly including at least one tucking blade on a rotary paddle.

32. The apparatus of Claim 25, wherein the device for pushing the side seams onto the body portion comprises two opposing assemblies, each assembly including at least one tucking blade on a track that guides the at least one tucking blade a distance alongside the at least one conveyor.

33. The apparatus of Claim 32, wherein the track of each of the assemblies maintains the at least one tucking blade essentially parallel to the pant-like garment.

34. The apparatus of Claim 32, wherein the track of each of the assemblies travels essentially parallel to the at least one conveyor and above the at least one conveyor.

35. The apparatus of Claim 32, wherein the track of each of the assemblies travels essentially parallel to the at least one conveyor and below the at least one conveyor.

36. The apparatus of Claim 25, further comprising an infeed section having a pair of nip rolls.

37. The apparatus of Claim 25, further comprising a driven stacker assembly having at least two stacker finger units.

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